



CAMBRIDGE UNIVERSITY
AND WAR



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(In all quotations in the following pages, the words in italic type are emphasised by ourselves, for the purposes of the pamphlet, and not by the authors of the writings or speeches quoted.)

I. PEACE PRATTLE AND WAR PREPARATIONS.

"I AM not one of those people—a small minority, I believe—who affirm that the misery and bloodshed of this war is the direct consequence of our sins. Given German arrogance, German treachery and German ruthlessness, bloodshed and horror must needs be. But is it not certain that the bloodshed and the horror need not have been so great . . . if considerations of party politics had not prevented reasonable preparations being made for the threatened struggle? Surely a large majority of any assembly of 600 or 700 men, even though they were chosen almost haphazard, if they had been made acquainted a year before the war with those indications of the coming storm, which have become public knowledge since the war began, would have recognised the futility of crying peace, peace, peace when there was no peace."

(R. H. Kennet, D.D., in the University Sermon,
Nov. 12th, 1916.)

THERE WAS NO PEACE IN 1912, 1913 and 1914, but in those years peace was cried aloud throughout the University. Political societies discussed the problem of peace, special peace societies were formed, discussion followed discussion on the furtherance of peace—the Union debated it—the clergy preached it—but while controversy continued—while words and phrases succeeded one another, while posters filled the College screens—war was being prepared. The well-meaning sections of the University were interrupted in their cries of peace by England's declaration of war on August 4th, 1914.

There is no peace to-day! But there are more peace societies in Cambridge than in any other university. Political societies discuss the problem of peace—special peace societies are formed—the Christian Peace Society, the New Peace Movement, the Anti-War Movement discuss, debate the causes and the cures of war; their posters fill the College screens; eminent men lecture to attentive audiences; eminent professors pledge themselves to peace—but while we are crying peace, war is being increasingly prepared.

And it is being prepared in other places than the munition factories—it takes more than bombs and aeroplanes to wage a war. Weapons must be designed—armies must be led—the War Office and the Admiralty must be fully staffed with capable

organisers—and active propagandists must be found, for the Government owed the rapid recruitment in 1914 to no one more than to its loyal servant, the Press.

The chief source of all these elements that are so necessary to the successful carrying-on of a war—officers, technicians, interpreters, scientists, intelligence service, chaplains, financial advisers, spies and propagandists, the factories where they are carefully turned out and prepared by mass production, are the Universities of England. And for the Great War of 1914-1918, as is gratefully admitted by the Royal Commission, there were no more efficient factories than Oxford and Cambridge.

“Brains, rather than arms, have been the determining factor in the Great War. Every kind of special knowledge and every type of trained intelligence have been mobilised in countering the enemy's devices, inventing means of extending the offensive and in strengthening our position both at home and abroad. . . . Probably one of the chief gains of the country from the war will be the discovery that was then made of the value of men with University training for all departments of national service. ***Cambridge, like the other Universities, gave her all.”***

(British Empire Universities Handbook, 1913-1920, Appendix, “The University and War.”)

II. FRESH WOODS AND PASTURES NEW.

THE CHANGED FACE.

“Cambridge has opened the new academical year with a good deal more of the aspect of a garrison town than that of a University. Instead of rushing off to the playing fields or the river after lectures, for football or boating, men are betaking themselves daily to the drill-ground for a three-hours' hard grind in military training under the direction of the O.T.C. and then sacrifice part of their evening in military lectures.”

(Observer, Oct. 18th, 1914.)

In October, 1914, the purpose of the University as a place for education, for the study of peace and other “abstract” subjects, had been quite forgotten. Cambridge had been swiftly and smoothly converted into a tool for another purpose.

BUILDINGS.

As time went on a greater and greater proportion of the University buildings were handed over without hesitation for recruiting agencies, soldiers' lodgings and other war offices; some were commandeered, others voluntarily handed over by the authorities themselves.

"The Lent Term opened at Cambridge under circumstances even more abnormal than those with which the Michaelmas Term was begun. . . . The soldiers commenced to arrive during the Christmas week, their numbers being continuously augmented until the place is full of them. . . . The whole of Whewell's Court, Trinity, is occupied by the rank and file, and nearly all the Colleges have set apart rooms for the use of soldiers and reading, writing and conversation rooms. . . . The life of Cambridge has been so transformed by this peaceful invasion that the place hardly knows itself."

(Observer, Jan. 10th, 1915.)

During the war part of the biochemical, engineering and Cavendish laboratories were commandeered for the billeting of troops. The Examination Hall was used first as the Headquarters of the Cambridge Civilian Drill and Shooting Club, and then as a mess-room. There was an end of rowing for a time, because all the boathouses were commandeered for the soldiers. Pembroke's Old Library became a war office. New features of economic life, a result of the country's loss of its regular skilled workers, also made their demands on College buildings. Thus during the Easter vacation, 1917, Girton College was used by girls from the Eastern Counties, who were being trained for the women's land-service movement at the University School of Agriculture.

No one resisted the abnormal uses which were found for the College buildings. On the contrary, the authorities vied with each other for the honour of accommodating the forces of war in the precincts of the University. The single instance of resistance which we can note is the mild objection of the Clare Fellows to the transformation of their garden into a rifle-range!

UNIVERSITY MEN LEAD THE ARMIES.

It is true that the war might have been waged without the use of the University buildings. But, as the Government admitted, it would have been much more difficult to carry on the war efficiently without the services of the University men—

especially at the beginning. The Government recognised in its University staff and students a very special and perfect weapon, a weapon ready-made; both as an army leadership and as a technical staff. This is what the Royal Commission has to say:

"The value of the gift which the Universities had to offer was enhanced by the fact that in the early days of the war, when there was a great dearth of men qualified to take commissions, Oxford and Cambridge were in a position to give the country a peculiarly large number of men gifted to act as officers, by their education, their upbringing, and in many cases their experience in the Officers' Training Corps."

In October, 1914, Dr. James, the Vice-Chancellor, proudly boasts of University enlistment up to date:

"The University has contributed a worthy share of her sons to champion the cause. Nearly 2,000 applicants for commissions from our younger graduates and our undergraduates have passed through the hands of the indefatigable Committee of the Board of Military Studies; and this number does not include the very large contingent who have applied through other bodies, those who already held commissions at the outbreak of war, those who have enlisted in the various branches of the service (among whom we give special thought to the gallant crew of the Cambridge ship the *Zarephah*)."

But the best illustration of the effectiveness of recruiting among students, of the completeness of the process by which the University was swallowed into the battlefront itself, is the statistical account of the University residents, 1914-18, and of the numbers killed in action.

The following were in residence from 1913-1918 (*Cambridge Review* figures):

Oct. 1913	-	3,263
Lent 1914	-	3,181
Oct. 1914	-	1,658
Oct. 1915	-	825
Oct. 1916	-	444
Oct. 1917	-	398
Jan. 1918	-	408

The *Cambridge University Reporter* (March 7th, 1916) gives facts about 294 out of 301 graduates who obtained appointments in 1914.

- 146 joined the Army or Navy.
- 42 went into manufacture or business directly connected with war supplies.
- 6 were employed in Government work connected with the war.
- 1 was interned in Germany.
- 61 were employed abroad by the Colonial and India Offices and other Government Offices.
- 8 were abroad in other capacities.
- 6 were known to have attested.
- 14 were above military age or ineligible.
- 10 probably ineligible, went into scholastic or educational work.

In the *Cambridge Review*, Feb. 7th, 1917, the following figures are given :

Total numbers on service	-	13228
Killed	- - - -	1438
Wounded	- - - -	1980
Missing	- - - -	210

Direct military operations all but emptied the University and also penetrated what little life remained there. The O.T.C. trained and drilled at fever-heat throughout the war. The seniority and dignity of University authorities such as the Master of Downing did not prevent them from setting a good example to the younger men by attending drill. The *Windsor Magazine* (1915) reports :

"Time tables were given of activities in Cambridge, and showed quite clearly that from 2 o'clock onwards military duties were the only thing. In Oxford it had spread into the mornings. Similar conditions prevailed in the other Universities."

THE UNIVERSITY FOCUSES ITS BRAINS ON WAR.

The Great War was fought not only at the front. The sophisticated horrors of modern war technique were evolved in offices, studies, laboratories, with pen and paper, with scientific apparatus ; they were the child of the trained and expert mind. The Government repeatedly emphasised that the administrative and technical assistance of the University was just as indispensable as its supply of officers. In the words of the Royal Commission on Oxford and Cambridge Universities :

"Few even of those best acquainted with the various studies of the Universities had realised how large a part the staff and young graduates would be called upon to play in the many

auxiliary departments which were set up for administration or the solution of special problems. The Universities of Great Britain from the very beginning were almost depleted not only for the fighting but for the thinking services of the Crown."

CAMBRIDGE SCIENCE.

Cambridge is the home of British Science ; and one might have thought that the Cambridge scientists, or some of them at least, would have stood their ground against the general inrush and ferment of propaganda, and would have ignored an appeal whose foundations were not built up of scientific facts or necessities. But in *Nature*, the official scientific organ, Cambridge policy is held up to all other scientists as an example.

"Action is being taken by the Master of Christ's College, Cambridge, and the Secretary of the Appointments Board of the University, to form a Committee of members of the University to advise the 'Entente Trade League.' Here is an effort in the right direction ; but it cannot be too strongly emphasised that WE ARE AT WAR, and the first duty of all men of science must be to organise, and to place their services unreservedly at the disposal of the War Office. ***We cannot all be soldiers, but we can all help, we men of science,*** in securing victory for the Allied armies."

(*Nature*, October 29th, 1914, Editorial, "Science and the State.")

For science, as for other University work, War was now the End, and all its efforts were the Means.

At first the nature of the researches and expert work carried out in the laboratories was kept secret. A few general statements were published, but that is all. In the *Cambridge University Reporter*, 1916, laboratory researches are reported in the following brief form :

"*Mechanism and Applied Mechanics.* All the members except two were engaged in Government work.

"*Biochemistry.* A good deal of research work was done, and early in the year an investigation was carried out on behalf of a branch of the Ministry of Munitions.

"*Chemistry.* The staff and research students of the laboratory devoted themselves to original work of an emergency kind for various Government departments. The whole of this work is

confidential in character, and consequently practically no original work has been published from the laboratory.

"But soon after the war, accounts were published which do full justice to the variety and significance of the war research carried on in the Cambridge laboratories, or by Cambridge staff commandeered from the laboratories for special research.

The *British Empire Universities Yearbook* (1918-20) gives detailed information as follows :

"Engineering Laboratory.

"Very soon after the war began, the late professor and two members of the teaching staff joined the Staff at Chatham, and took part in the training of Royal Engineer officers. After a short time the workshop staff and several others were engaged in the manufacture of apparatus and the carrying out for the Admiralty of a long series of tests, under the direction of the late professor in connection with the *protection of ships from the effects of high explosives*. (When the work was satisfactorily completed a certain amount of experimental apparatus was designed and manufactured for the Royal Aircraft Factory and other Government establishments.) By this time all the younger members of the teaching staff were engaged in military and naval duties elsewhere, and those who were left proceeded to develop in the workshops the *manufacture of gauges*. From this, the workshops, with a staff augmented by several senior members of the University and others, took up the *manufacture of shells*, and this was continued right up to the time of the Armistice.

"Members of the teaching staff and former members of the Department figured prominently in many of the scientific activities of the Government Departments during the war, as well as in the field. *The nucleus of the staff at the R.F.C. Experimental Station at Orfordness consisted almost entirely of Cambridge-trained engineers.*

"A considerable proportion of the *new bridging material* of the R.E. *which played an important part in the final stages of the war* was designed by, and manufactured under the supervision of, a member of the teaching staff. *Former students of the Department were associated with the design of the tanks, and one of these was responsible for the design of the engines for the tanks.* Several former students joined the staffs of the Royal Aircraft Factory and of the Air Ministry, whilst another figured prominently in connexion with wireless telegraphy at Woolwich.

" Cavendish Laboratory.

"The work done in connexion with the war by the staff and research workers was carried on both in the Cavendish itself, and in the various laboratories established by the Government to develop the applications of science to the needs of the Navy, Army and Air Force. At the Cavendish it included the *investigation of methods of signalling to and from the trenches, of filtering out extraneous sounds in acoustical methods for detecting submarines*, a long series of experiments carried out for the Navy on improvements in hot wire valves for the transmission and detection of wireless signals, experiments on the methods of protecting airships from lightning, and *methods of measuring the rate of growth and the magnitude of the pressures developed by high explosives*. Members of the laboratory staff and research students joined the staff at the Royal Aircraft Factory at Farnborough, H.M.S. Vernon, the Admiralty Experimental Station at Portsmouth, etc. etc.

Chemical Laboratories, etc.

"The variety of the work undertaken in these and the other departments, especially that of Chemistry, is indicated in the following summary of subjects dealt with: *the production of new dyes for panchromatic plates for aeroplane photography; 'dopes' for aeroplanes; manufacture of new poison gases and liquids; war-gas diseases; invention of gas-masks; diagnosis by electrical methods of nervous injuries; lice and itch (Army Council Instructions regarding these pests were largely based on the work done at Cambridge); preservation of fish; stage at which cattle should be slaughtered; pig-feeding and beef production; silage; . . . aeroplane compasses; apparatus for timing and dropping bombs; design and construction of non-rigid airships; aircraft gunnery; location of sounds in war; protection of kite balloons against lightning; range-finders for Zeppelins and anti-aircraft methods . . .; examination and analysis of water supplies and foodstuffs, road-making and building material. In the case of the first-mentioned subject, the Allies were, up to the outbreak of war, entirely dependent on Germany for 'photographic sensitisers' and but little information about their identity and methods of preparation was available. Methods of producing all the ordinary sensitising dye-stuffs were devised in the Cambridge laboratories, and all the sensitisers used by the Allies were prepared there."*

If we are to realise the seriousness of this scientific contribution, we must try to imagine what the war would have been like without poison-gases, without the tank, without efficient aircraft guns, methods of releasing bombs, photographic apparatus ;—to take only a few examples.

Trained research students do not drop out of the blue ; they must be provided by centres of scientific learning ; in 1914 what centres of scientific learning existed, other than the Universities ? Resistance from this quarter might have meant considerable dislocation of war operations. But there was no resistance.

The Government was far from under-estimating these services. "Sir J. J. Thomson and Mr. Horace Davison were among many distinguished scientists who accepted Mr. Lloyd George's invitation to assist the inventions branch of the Ministry of Munitions just constituted."

(*Cambridge Daily News*, February, 1916.)

In recognition of his war services, Professor Pope was presented with the O.B.E. at the end of the war.

Knowledge and Culture in Action.

The scientific workers were not, however, the only brain-workers whose skill was used for the purpose of war, for the destruction of human beings. There was no faculty, however "pure," however cultural in intention, that was not brought into action. The *British Empire Universities Yearbook* and the Royal Commission take pains to show how the war machine made use of minds trained in economics, languages, history, religion. The *Empire Handbook* notes that **pure** culture found its appropriate service on the battlefield rather than in the research departments. "The younger teachers of literary subjects mostly took ordinary commissions and were exposed to ordinary risks. Of the historians alone, seven were killed in action."

But even literary subjects were "adapted for direct war services."

"The General Staff," the intelligence branches of both Navy and Army, the Administrative Departments of the Government, old and new, found among men, and also among women, educated at Oxford and Cambridge, many who were able to give very

valuable help in the conduct of the war, sometimes by their knowledge of languages, economics, law or other subjects. Knowledge of out-of-the-way information, and dialects possessed by individual members of the University was also discovered and used in many departments and in the field for the strangest and most important services, whether of propaganda, censorship, or intelligence." (The Royal Commission on Oxford and Cambridge Universities.)

"Archaeologists with special knowledge of the Greek area were most useful in helping naval and political work in that region. Students of economics found scope for their speciality in the Treasury, the Board of Trade, the financial sides of the Admiralty and the War Office, and in the Ministry of Munitions."

(*The British Empire Universities Handbook.*)

Dr. Holland Rose was employed by the Y.M.C.A. at the French war bases to lecture to the troops on such subjects as the following: "How the war came about," "Germany's plans in the East and how we may defeat them," "The achievements of France," etc.; and was also made use of at home by a Board whose purpose was to cover all the English Universities with a series of extension lectures on the war. Other history lecturers were used for the same kind of work.

(See *Cambridge University Reporter*, October 31st, 1917, Report of the Syndicate by the Secretary for Lectures, etc.)

CAMBRIDGE BRAINS AND WAR BUSINESS.

We have further evidence that Cambridge gave direct help to the commercial interests involved in the war, and not only to the machinery by which the war was carried on. It is symptomatic that in 1919 the three great British oil companies, assisted by Mr. Deterding, endowed a Chemical School in Cambridge. This action on the part of great private companies will appear less strange if we consider a note which appeared in the *Cambridge Review* of November 11th, 1914: "With a view to helping firms anxious to avail themselves of the openings for the capture of German manufactures, the Master of Christ's has furnished the executive council of the Entente Trade League with the names of members of the Staff of the University willing to advise British makers of certain goods." There seems to have been at least a brotherly relation between Cambridge science and war business.

The *Cambridge Magazine* of 1917 pictures for us the effect upon University life of all this pressing activation of its permanent staff. "It is only fair to add that figures for the Dons (i.e. statistics of residence) are somewhat fluctuating, and many of them only put in an appearance for week-ends or even for lectures, so urgently are their services now required by the Government departments, which now in so many cases claim their allegiance."

MORALE.

Cambridge, again, helped to supply the backbone of religion for the fight. According to the *Cambridge Review* (1917-18), Cambridge could be relied upon to lend most valuable aid in keeping up the religious morale of the troops. The *Review* continually refers to the Y.M.C.A. hut at the Front, and in the appeal for Y.M.C.A. lecturers from upper-class families it is given out that "the mental life of the army in France demands food which the Universities are best fitted to supply."

And, more prosaically, the University staked her money in the war. From time to time we read of sums of money invested by the University and its Colleges in war stocks and armament firms. Here are a few examples. The *Cambridge Review* of March 3rd, 1915, refers to the shares held by Trinity in Messrs. Cammell, Laird and Co., a munitions firm. On May 3rd, 1916, the University held upwards of £90,000 war stock and £12,000 Treasury Bills. In June, 1917, after the conversion from 4½ per cent. had been made her holding in 5 per cent. War Loan amounted to £130,000.

When we come to sum up the factors which the University supplied in the last war—trained soldiers, leadership, technique, inventions, translators, expert knowledge, administration, morale, money!—all desperately necessary for the prosecution of a modern war—we are led more and more plainly to the conclusion not only that the Universities can be used for war, but ***that if they resist a war they can very considerably hinder its progress.***

III. THEY ALSO SERVE WHO ONLY STAND AND TALK.

"It is a most uncomfortable time for thinking. . . . If they die to-day you may be quite certain that it is for their faith of to-day. . . . Let us not forget that it is a question of faiths where logic has

always had little to say. . . . To-day the tempest is around them ; they cannot answer your appeal. Clear for action ! ”

(M. Chouville, in a reply to M. Romain Rolland,
Cambridge Magazine, Nov. 21st, 1914.)

INFLUENCE OR INSTINCT ?

Perhaps it will be objected at this point that there is nothing particularly surprising in the transformation of the buildings and all the technical apparatus of the laboratories into part of the war machine ; that in war time this is inevitable. But what was not so inevitable, what is more surprising, is the way in which the overwhelming majority of the staff were swept off their feet by a wave of senseless and unreasoning Jingoism, the way in which they eagerly lined up to provide learned and “scientific” sanctions for the propaganda of lies and hatred with which the war was conducted. And when H. A. L. Fisher (now Warden of New College, Oxford) writes : “No measure of compulsion was needed to bring the Universities into the National Crusade against the German crime,” or when A. C. Benson adds in the same book, “There was no disposition to reason or to argue. It was a question of instinct and feeling from the start. Even those who had always hated war went in the end. . . . The simplicity of duty and the desire to be with the rest,” they are perhaps underestimating the part played in this mobilisation of the students by their own barrage of propaganda.

To the overwhelming majority of the staff there was not the slightest suspicion that this was anything but a just and necessary war. Dr. James, in his address on his admission to the office of Vice-Chancellor, summarises the position :

“The University meets in such circumstances as it has never known. . . . Yet there is no doubt that we are bound to carry on our work, for by it we can render definite service to the nation. . . . Our part, while we encourage all of our students who are capable of doing so to serve their country . . . is to prepare more men—especially in our medical schools—to keep alive education, religion, learning, research. Let us confine our controversies within the narrowest limits.

“I have spoken of the trials. Let me add also that we shall be better able to bear them not only because our cause is just, but because we know that the University has contributed a worthy share of her sons to champion the cause.”

In the next year he goes a step further :

"The policy of the University in this crisis has been to render all employment of its resources, material and intellectual, for the benefit of the country."

Many of these resources were mobilised for war work on a national scale : "Was not Mr. Keynes summoned to London to advise in the financial crisis? Mr. Tatham is still, we believe, working at the War Office ; Mr. Ralph Butler is acting as interpreter with a divisional headquarters staff. Mr. Lucas, Mr. Taylor and Mr. Aston are working in the aircraft factory, designing, let us hope, an irresistible super-Zeppelin. Finally, is it not a pamphlet of two well-known Cambridge scientists, which, printed in tens of thousands by a grateful Government, is to teach the men of our Expeditionary Force how to grapple with the prosaic, but to the troops grimly serious, problem of vermin? And these are but a few names among many."

(*Cambridge Review*, 1914.)

But for those who were not of sufficient importance to be used for the solution of the prosaic problem of vermin, a use could still be found at Cambridge in the campaign against the "German crime." The powers who made these representative statements on behalf of the whole University need have had no qualms about the support they were to have on this issue. True, there were exceptional cases, particularly towards the end of the war, of people who made some attempt at an objective analysis of the war. ***But for the majority the process was first of all to line up, and afterwards to find arguments for the reason, justice and humanity of the war.***

MINISTERS OF MORALE.

The University sermons give the most interesting cross-section of statements concerning the nature and origin of the war by men who both before and since have been considered as sane and responsible persons.

Listen to the Rev. C. A. Alington (late Headmaster of Eton) :

"When we think of the many bad wars, dynastic or financial, in which this country has engaged in the past, we can at least thank God that in our own day and in the greatest war which this country has ever known, we have said no word and sought no gain which we should not be glad to answer for in the day of reckoning."

(University Sermon, October 25th, 1914.)

But if Dr. Alington was prepared to justify the purely spiritual war of 1914, others could be found to give God's official sanction to the previous "dynastic or financial" "bad wars" in which England had been engaged. This is what Dr. J. B. Robinson, Dean of Wells, said on August 24th, 1914 :

"Our fathers trusted in God and He helped them. He was with them at Trafalgar and Waterloo. Did not the Iron Duke trust in God and do his duty? Truly God was with our fathers when our soldiers were dying like flies in the Crimea. Through it all and out of it in the name of God we became stronger than before."

Mr. Robinson must have rather curious ideas about God's power and about his goodness. But it is very interesting to compare this confident assumption of divine support with the prayer used by the German Catholics during the war :

"This is a war for the holiest and highest that a people can possess, for the very existence of our Fatherland. . . . Almighty God, for the sake of Jesus Christ Thy Son, spread Thy Almighty hand over Germany and Austria. . . . Holy Michael, patron saint of the German people, be thou the leader of our armies. Let all Catholics in Germany and Austria find strength and courage at this time in Holy Mass."

It was not sufficient merely to enlist God's support for the war. It was necessary also to show that the war was being fought in order to uphold the Christian technique of warfare. The Bishop of London, preaching at Great St. Mary's, said :

"We are fighting for Christian principles as the governing principles of the world. We were fighting for a Christian conduct of war against an un-Christian and pagan conduct."

BLESSED ARE THE PEACEMAKERS.

But there were others who were not content to present the war merely as a disaster in which, however, God and justice had enlisted for the Allies. There were some who thought that it was a judgment sent from God to purge the world for its misbehaviour and that the final result would be to brighten things up all round.

H. Gresford Jones, M.A., says in the University Sermon on October 29th, 1916 :

"The tremendous catastrophe through which we are passing is re-awakening the world to the inexorable moral laws of life. Here before our eyes, naked, colossal, appalling, is Judgment. . . . See what it is to which man comes when he has left out God. . . . The grandeur of the Atonement—limited, it may be, stifled, it

may be, in the close air of the study or classroom—has found its true glory upon the battlefield. . . . Would that I could convey to others that fresh access of conviction which has come to me as I have spoken to soldier after soldier of the Cross of Christ, and the well-nigh invariable answer has been, 'Of course there is nothing but that.' . . . The new world must be the outcome of this conflict, the partnership of the nations in the one Family of the Kingdom of God."

It took more than one man and more than one method to convey that fresh access of conviction about the glory of God on the battlefield. But he is supported in several quarters in this interpretation of war.

F. S. Chavasse, in the University Sermon of May 7th, 1916, said :
"There is no doubt that England greatly needed this revelation (i.e. the war). Eighteen months ago true patriots were dismayed, and even appalled, at the serious signs of decay and deterioration in our national life and character."

The Venerable A. G. Robinson, too, found that war made life a lot more interesting :

"Under the stress of war men have become wildly adventurous, and for the first time they have discovered what it is to live."

CAMBRIDGE MUST PROTECT CULTURE FROM THE HUNS.

It is only because the material at our disposal is more comprehensive, and not because the rôle of the other sections of the University is any less incongruous, that we have made such extensive use of the University Sermons. Sir Arthur Quiller-Couch provides us with a gem of objective analysis from the English faculty. In an address on "The Huns and Literature," he is reported as saying :

"The Germans are congenitally unfit to read our poetry ; the very structure of their organs forbids it. . . . The German who can write even passable English is yet to be found. . . . For them the great body of our literature was simply the dead possession of a decadent race . . . for tabulation, not for growth and cultivation. . . .

"There can be only one way of exorcising this menace of dusty historicism—the sword in the hand of the young, who will see to it that the tumour is cleanly lanced."

This is a fine example of the good Anglo-Saxon logic that is opposed to German dusty historicism. "These Huns can't read

our poetry . . . they can't write English . . . what is there for it but the sword ? ”

Just how willing the Cambridge theorists were to scrap their pre-war theories and replace them by others of a more patriotic nature is shown in another case, that of Sir Charles Waldstein, who before the war had been an enthusiastic Germanophile. This is an extract from the *Cambridge Review* of November 15th, 1916 :

“Aristodemocracy from the Great War back to Moses, Christ and Plato.

“Sir Charles Waldstein, writing in the first year of the war, traces its origin to “alldentscher” militarism, and finds the underlying causes in the inadequacy of German morals. . . . The praise of Germany in his earlier books as ‘the country of intellectual depth and sincerity of mind, of thoroughness and spiritualisation of man’s achievements, of unending perseverance in the fight for truth,’ sounds a little strange now.”

Sir Charles subsequently changed his name to Walston.

Comic relief is supplied by the Modern Languages faculty :

“Dr. Waterhouse has much to say of the utility of German, but if pressed he is prepared to advocate the study of it as a dead language.”

(*Cambridge Review*.)

And a correspondent to the *Cambridge Magazine* has a bright idea :

“Sir,

“Poetic justice to Rheims is possible. It is well within the powers of modern builders to transplant hither Cologne Cathedral, stone by numbered stone.

“Let this be a symbol and monument of our victory.

“Yours, etc., Old Trinity Man.”

For at least one contributor to the *Review*, war is the main-spring of all creative activity. E.S.P., in reviewing a book by L. Haward, writes :

“War and Art can be brought into one bill—but in alliance, and not in the antagonism in which Mr. Haward prefers to view them. In their biggest senses they are coincidental expressions of energy—they ever and anon clean up civilisation, brushing the caked mud of stagnant rituals. At any rate, we can measure to this effect the Persian wars on Greek art, and how the civic strifes of Italy bred Michelangelo. . . . He has nothing at all to say of architecture, the ‘mistress art’ that has the pulse of war in its veins.”

The last sentence is a pleasant indication of the intellectual straits to which patriotic theorists were reduced.

But it is not enough simply to theorise about war. The Hun is at the gate. An elderly senator introduces a note of grim reality :
"Sir,

"I am confident that a large number of members of the University who are above military age are asking themselves and one another what is their duty at this present moment.

"I say emphatically that it is our duty to drill and learn to shoot. In the worst contingency, the enemy would soon be in our midst. In the event of invasion, the War Office may at any moment find it necessary to raise the age limit, and we older people ought to be preparing to take our places in the firing line. Someone must take the lead. Cannot some of those with military experience start the movement ?
"Yours faithfully, Member of the Senate."

And so, if the worst comes to the worst, the Kaiser will be able to storm the Senate House only through rivers of professorial blood.

ACADEMIC EXPERIMENTS IN PACIFIST BAITING.

Sometimes this continued childish hysteria produced a reaction. G. V. Yule, who wrote of an article in the *Cambridge Magazine* which criticised the rulers' part in making the war that it "was enough to make a decent-minded dog sick," was not really doing much to promote the Allied cause. And when at a meeting of the Wounded Allies Relief Committee, the Venerable Archdeacon Cunningham described the Union of Democratic Control as silly, childish and insane, and "Liberals, Socialists and Pacifists as worse than Jews," the main result was that 150 members of his audience left the hall.

Even the poets were mobilised to do their futile bit. One finds inspiration in a tank. Another writes the following on Prussia :

"Thy mailed fist the weak struck down,
Now shall the strong do so to thee,
Shatter thy kingdom, break thy crown,
Thy dream of power through victory.
A world in arms now bids thee yield
Thy sword so red with deeds of shame—
That world's bare word thine only shield,
And deathless horror at thy name."

But all these tendencies are summarised in a single incident.

A gentleman named Professor Ridgeway excluded a fourth-year student from Newnham from his lectures because she was a member of the Union of Democratic Control. In a letter supporting his action the Professor stated that "Newnham was a notorious centre of pro-German agitation," that "a member of the Newnham staff, also notoriously connected with the U.D.C., had recently made a speech at a public gathering in Newnham . . ., glorifying the Hon. Bertrand Russell, who had recently been convicted and punished for seeking to stop recruiting." In conclusion, he writes: "I certainly would lose my self-respect if I were to do anything to help women students who in face of the atrocities wrought and still being wrought by the Germans upon their sisters in Belgium and Northern France (worse than the blackest deeds of Alva) throw all their energies into the defence of Germany and the injury of their native land."

(*Cambridge Review.*)

This is the real expression of the intellectual content of the philosophies of the armchair fire-eaters of Cambridge. This is professorial patriotism in practice.

IV. DIE WACHT AM CAM, 1914.

We have seen the whole University complex of buildings, administration, information sources and scientific apparatus incorporated, dissolved into the workings of a war machine. We have heard University Vice-Chancellors, professors, preachers, coaxing the students to give themselves up to this machine, to become its driving power, to line up and fulfil the functions which no-one else could perform so well.

But why was it possible for this transformation to be so smooth, swift and effective? Why was there no upheaval, no hesitation? The University slipped easily into the war, as if war was a stage in its natural growth. Looking back, we find that this was not only due to the "adaptability and suppleness of the well-trained mind," to use the apt phrase of the Royal Commission.

If we regard the feverish expenditure of energy in Cambridge in October, 1914, as a response to a sudden call, as a noble patriotic gesture, we are very much mistaken. The University, no less than the British Government itself, was prepared for war.

To take a very important example : the war-mindedness of our University authorities and priests had a pre-war history.

THE PRECIPICE OF THE PINNACLED MIND.

No doubt it is possible to bring forward documents to prove that war is not part of the education which the University authorities have in mind for students and for themselves. For example, in 1921 the Vice-Chancellor of Oxford University banned the Oxford Labour Club on these grounds, "that he wished the Junior Members of the University to concentrate on the **purpose for which they came to Oxford, namely the study of abstract subjects.**"

The following is typical of the solemn declarations made by Cambridge men on becoming Fellows of their Colleges :

"I, N.N., elected a Fellow of this College, do solemnly declare that I will observe all the Statutes of the College, and will endeavour to the utmost of my power to promote the interests of the College, **as a place of education, religion, learning, and research.**"

(Statutes of King's College.)

Dr. Mayo, a member of the Senate, insists before the war and consistently throughout its progress that :

"A great University like Cambridge ought to **abstract itself** altogether from questions of peace and war. They ought to abstract themselves so thoroughly as not to feel dismayed or elated by anything which occurred in the course of the war."

(Quotation from a speech by Dr. Mayo in the Senate, May, 1915.)

Nicholas Murray Butler, President of Columbia University, pushes the University even further along the road to abstract and infinite truth, for he says that ideally it should abstract itself from questions of education. "**A University exists for the pursuit of Truth. Students are only incidental.**"

(Speech, quoted in *Student Vanguard*, June-July, 1933.)

But the corollary of Mr. Butler's view is very curious : it is this, that war is an education. "**We are now in another stage of the education of the world.** It has pleased Providence so to order events that this tremendous happening has taken place, and those who read history as a movement of intellectual and

moral and spiritual force and power towards ends, see in this, another great step onward in the education of mankind. We see in it an education of mankind in faith, for faith, and to a new appreciation of faith."

(Address delivered by Mr. Butler at the War Dinner in honour of the Archbishop of York and the Members of the House of Bishops, April 10th, 1918.)

The doctrine of the abstract purpose of the University has, indeed, strange bedfellows among the theories of our elders.

This aloof poise, this abstraction from the world, is destined to give place to nastier things. Perhaps during peace the University may stand above the world, indifferent to the social purposes of her students, to their future careers as productive human beings ; indifferent to life, in fact. But when the call came in 1914 for students to take gun in hand and fall in with the purposes of destruction, the University did not rise and proclaim her un-worldliness. She was immediately wooed and won. She allowed her academic pretensions, even her academic vows, to be swept aside overnight.

If we look back on events in their historical perspective, this precariously disinterested outlook takes on more and more the appearance of common frivolous ignorance. The questions which world events put before the University on the outbreak of war in 1914 were rooted in the history of the previous years. University teachers, with their training and leisure, had less not more excuse than anyone else to be irresponsible about the forces making for war in their generation. This easily swayed, irresponsible state of mind is in itself part of the preparation for war.

OUR PRACTICAL SENATE.

But in 1914 the readiness of University authorities for war was positive as well as negative. In 1909, military studies as an alternative subject for the Pass Degree was supported in the Senate by Mr. Durnford in the following warm terms :

"He could not help thinking it would be the beginning of a real movement, which was so much desired by those who had the welfare of the Army and of the country at heart, to encourage more and more young men from the University to take commissions in the Territorial Army."

An article in the *Nineteenth Century* of March, 1914, shows us that in 1913 the question of making military studies compulsory

for a degree had been raised in Cambridge. We will quote from this article, because it has further significance.

"In the spring of 1913, when the deficiencies of the Territorial Forces had become very obvious, a proposal from Cambridge attracted considerable attention. It was certainly novel, for it suggested that the student class, one hitherto exempted by law or privilege from many ordinary duties of citizenship, should be called upon to qualify in military training as a condition of obtaining the first University Degree. We feel that the accession to the Forces of a considerable proportion of men of greater opportunities and responsibilities would not only give to it additional numerical strength, but would add to its prestige and draw others into its ranks" (here follows the detailed outline of a scheme for the militarisation of the University). We aim at drawing into a channel of directly national utility much of the superabundant energy now devoted to the river or the cricket field. A class with special privileges has also special duties, and we would urge, as University men, that our class should lead the way in the performance of a national duty. . . . If the self-governing bodies of the University are not prepared to unite in the common promotion of a more patriotic public opinion in the supreme interest of national defence, they must be content to occupy a place less prominent in public estimation.

T. F. Huddleston.

C. F. Heycock (King's College)."

The gentlemen of King's College who wrote this article believed, just as the Royal Commission proudly believed, that the training of the University man for war is not only a military training, but a training of "class and upbringing." We will not attempt to deal with such a serious suggestion, but will confine ourselves to proofs of more obvious and superficial preparation of human material.

This article had lively repercussions. In the *Cambridge University Reporter* of June 8th, 1914, we read that "the following Members of the Senate among others are in general agreement with the suggestions on the above subject in the *Nineteenth Century and After* of March, 1914, and request that their names be appended to a Memorial to the Council of the Senate, requesting them to nominate a Syndicate to consider how best the proposals in the article may be carried into effect with the approval and

co-operation of other Universities." The total number of the Memorialists, exclusive of the three Members of the Council, was 1,741.

Alas for the furtherance of truth, learning, religion and research ! The list of signatures appended includes the Masters of Trinity, Magdalene, St. Catharine's, Christ's, Jesus, Selwyn, together with several Bishops and Headmasters.

The discussion of this Memorial was cut short by the outbreak of war and the rushing through of more drastic measures. But the Masters of Trinity, Magdalene, St. Catharine's, Christ's, Jesus, Selwyn, and the Bishops and the Headmasters need not have been so anxious. There were other strong-minded people who were acting while they were talking. The fullest account of war preparations in the University before 1914, which gives due recognition to responsibility, is to be found in an Editorial in the *Cambridge Review* of October 14th, 1914:

"One man beyond all others perhaps had a right to be proud, in that he saw the fruition of a long period of relentless work. It was clear at last to even those least interested in military matters, how much Cambridge has owed to Captain Thornton. The magnificent response to the offer of commissions was in part due to ordinary patriotic sentiment, but that this response was not merely the generous impulse of an untrained mob was due to a man who by his life among us in the last four years has quietly taught a most unmilitary University that military studies and military training can command as much attention as sister sciences and sister sports."

A PLAN OF ACTION TWO YEARS OLD.

A still more revealing statement is made by the Board of Military Studies in their 1916 Report. "On Sunday, 2nd August, 1914, instructions had been received from the War Office bringing into immediate operation, in view of the national emergency, and the general mobilisation expected, **the scheme which had been prepared some two years before** for the appointment of Cadets and ex-Cadets of the C.U.O.T.C. and of other members of the University to commissions in various branches of the service. In pursuance of this scheme the Secretary of the Board sent out a circular on 2nd August . . ."

The scheme which had been prepared two years before !

V. PERPETUATING THE FOLLY—CAMBRIDGE TO-DAY.

Extract from a letter of Lieut. A. Don, who died May, 1915 :

"The greatest trial that this war has brought is that it has released the old men from all restraining influence and has let them loose upon the world—the old men are having field days on their own. In our name and for our sakes, they pathetically imagine that they were doing their very utmost, it would seem, to perpetuate by their appeals to hate, intolerance, and revenge, those very follies which have produced the present conflagration."

INDIFFERENCE EVEN NOW.

Our University teachers hustled us into the last war not so much by appeals to hate, intolerance, and revenge, as by making what we were doing seem full of purpose, by promises of hope for the future. We were fighting a war to end wars ; we were fighting to save democracy. Very soon after the war it was clear to us that whatever else we had been fighting for, it was not for either of these. The thirteen million lives lost in the war were not a sacrifice, as we are so glibly told every November 11th ; a sacrifice implies a loss in the interests of a higher good. But these lives were merely irretrievably wasted and thrown away. In view of the growth of Fascism on the Continent and recent measures taken by our Government it would be laughable to say that democracy is a greater reality to-day than it was in 1914. And peace is certainly not nearer ; already our armaments are piled higher than they were in 1914, while the 1935 Air, Army, and Navy Estimates plan ten million pounds increased expenditure.

Surely our University authorities cannot to-day forget that in 1914 it was their indifference and their persuasiveness which sent thousands of Cambridge students to lose their lives in a game which had no part in the betterment of the world. To-day we might have expected them to acknowledge the mistake which they made and to refuse to take up their stand on the side of war—for this is what they are doing when they allow war preparations to grow within the University. We might have expected them to give us a lead by throwing their whole influence into resisting war preparations inside the University.

But at the time of writing, their state of mind must still be

counted as part of the preparations for war. They are still indifferent, and could still be swayed. Our historical experience should make us severely critical of this attitude of innocent and fatal detachment. Anyone who has taken the trouble to read as far as this, will realise that we do not make this criticism for its own sake.

How are we prepared to-day ?

THE OFFICERS' TRAINING CORPS.

First in importance is the O.T.C. and its development. The object of the O.T.C. is stated in the War Office Regulations for all Officers' Training Corps, 1925 : "The primary object of the O.T.C. is to provide students at schools and universities with a standardised measure of elementary military training ***with a view to their application eventually for commissions in the Militia, Territorial Army, and the Supplementary Reserve.***"

In 1932 the Government decided it was necessary to improve on the O.T.C. by a scheme to " earmark potential officers." The state of preparedness before the war of 1914 was not good enough for their present requirements, they said.

"The last war showed that there is a large number of men with the education and capacity of leadership required of an officer, but that ***special arrangements are necessary to earmark potential officers beforehand so that in a great emergency, full use can at once be made of all their aptitudes. A scheme has therefore been introduced for the formation of an Officers' Cadet Reserve.*** Members of the senior division of the O.T.C. will be invited to register their names as having the intention, in the event of war, of offering themselves if holding certificate B for immediate commission, or if holding certificate A, for training as officers."

(Army Estimates, 1932, Memorandum of Secretary of State for War.)

In the same year the University gives its official approval : "That as a general rule the Commanding Officer of the Officers' Training Corps should be director in Military Studies," thus admitting more openly the Government's full control not only over the O.T.C. (whose commanding officer is appointed by the Government) but over the Military Studies' Board.

THE AIR SQUADRON.

The University Air Squadron is also regarded by the Government as a war reserve, as we are officially informed in the Air Estimates of 1932 :

"The Air Squadrons at the Universities of Oxford and Cambridge *have as their object the influencing of the flow of candidates for commissions in the regular Air Force, the Air Force Reserve, and the Auxiliary Air Force*, the stimulation of interest in air matters, and the promotion and maintenance of a liaison with the Universities in technical and research problems affecting aviation." If a University man wishes to learn to fly, he pays £3 a year and the Government pays the rest.

Big *increases* in the grants of both departments have been made in the last few years. Between 1924 and 1932 the fees for O.T.C. officers increased from £3,400 to £5,900. This year the War Office has announced that the Air Squadrons in Oxford and Cambridge are to be enlarged. Cambridge is preparing to do its bit once more.

RESEARCH.

The record of the last war shows that we must also be on guard against the use of our laboratories for war research. Let us set down the facts that have evaded the censorship.

The national perspective of war research—who pays for research and why?

Research in this country is financed by the State, by industry, and by endowments. It is carried out in research stations, both civil and military, supported by State funds ; in industrial laboratories ; and by research associations using their own laboratories or parts of others. Research supported by the State is for the most part severely practical. In the 1933 Estimates the War Office, Air Ministry and Admiralty earmarked a total of £931,475 for research, experiment and design ; while in the same year the Department of Scientific and Industrial Research, the main department for civil research, which was financing work on buildings, forests, survey, chemistry, fuel and physics, and was granting £93,500 to research workers and associations, estimated a total expenditure of only £504,637. Grants which may come to be applied to research are also made by the Board of Education and

various ministries, which still leaves about half the total expenditure of the Government on research to directly military work. It must also be remembered that much of the Department of Scientific and Industrial Research would be especially useful in war time.

Valuable Investments.

Industry not only supports its own laboratories but carries out research in University laboratories to an extent which a recent debate in the Senate revealed; and indirectly controls many University laboratories by endowment. Thus, the Department of Chemistry in Cambridge has been largely endowed by oil interests :—

"... The Department of Chemistry had received the largest benefaction which had ever been made to it in the whole of its history. That benefaction had been made by an oil company which was still carrying on business, and he was not at all certain that it had not in part been made because in the period before the war certain discoveries had been made in the Chemical Laboratories at Cambridge which became a vital factor in the supply of explosives during the war."

(Report of speech by Prof. T. M. Lowry (Professor of Physical Chemistry) in the Senate. *Cambridge University Reporter*, May 15th, 1934, p. 993.)

In the pregnant comment the professor recognises at once the vital importance of a successful war to the oil company (in 1914 the Admiralty announced their possession of a controlling interest in the Anglo-Persian Co.: British oil interests in this century have been involved in a number of other wars), and he recognises the fact that not only during, but especially before the war, the Department was engaged in war research. In fact, the directors of oil companies regard chemical research in general, and the training of chemists, and the gratitude of the staff of a chemistry department, as valuable war investments. The announcement which follows, made fifteen years before, gives a hint of their enthusiasm in the cause of University science.

"Christ's College Lodge, May 17th, 1919.

"Endowment of the School of Chemistry.

" The Vice-Chancellor has pleasure in publishing to the Senate the following portion of a letter he has received from Mr. R. Waley Cohen :

'It has been an immense pleasure to me to be able to write to Professor Pope and tell him that the British oil companies have agreed to join together in a scheme for endowing a Chemical School at Cambridge. The Burma Oil Company have agreed to contribute £50,000 ; the Anglo-Persian Oil Company, £50,000 ; the Anglo-Saxon Oil Company, £50,000 ; and Lord Cowdray and the Hon. Clive Pearson between them, £50,000, making the total of £200,000 which is required. Mr. Deterding, who has taken a very great interest in the scheme from the very beginning, has offered to make the £200,000 into guineas by adding a personal contribution of his own of £10,000.' "

(*Cambridge University Reporter*, May 20th, 1919, p. 730.)

The interest of firms which are also vitally interested in war, in chemists and chemistry, raises the question of what research can be used for war purposes. The answer is that a very large proportion of applied research would be useful in war ; we can only consider the more directly useful forms. These will include :—

- (1) Work paid for by Air Ministry, War Office, or Admiralty in whole or part ; or work done in any of the numerous research stations maintained by these ministries. This will include :—
 - (a) Chemical warfare research.
 - (b) Mechanics and engineering.
 - (c) Aeronautics.
 - (d) Explosives.
 - (e) Metallurgy.
- (2) (a) Industrial and agricultural research which makes for greater self-sufficiency for Great Britain ; e.g. work on sugar beet or on the production of oil fuel from coal.
- (b) National surveys. The coal survey which the Fuel Research Committee have been carrying out is of a type similar to one which was first carried out in 1916, when we can be certain that the Government had no spare energy for new pacific work ; but this is a more exhaustive survey.

- (c) Dyestuff and much chemical work. The establishment of an indigenous dye industry was carried out by means of protective tariffs soon after the war.
- (d) Psychology, and Industrial Psychology.
- (e) Bacteriology.

The range of research useful to war is immense. We must concern ourselves with directly military work of the first type.

Is war research done in Cambridge ?

That there are loose connexions between war ministries, the Department of Scientific and Industrial Research, research associations, university laboratories and staffs, and the chemical industry is well demonstrated. Two examples will suffice :—

In a letter in the *Industrial Chemist* (December, 1934, p. 507), signed by W. R. Barclay, consulting metallurgist to the Mond Nickel Co., Ltd., R. S. Hutton, Goldsmith's Professor of Metallurgy, Cambridge ; and H. Moore, Director of the British Non-Ferrous Metals Research Association, reference is made to "the Committee appointed by the D.S.I.R. to direct the progress of electro-deposition, which has been carried out at the Research Department, Woolwich, the University of Sheffield and the Royal Aircraft Establishment, Farnborough."

Here is research carried out both in military research stations and in a University, on the initiative of the Department of Scientific and Industrial Research, and commented on in patriotic tone by an employee of a branch of I.C.I. and a Cambridge professor.

Again, in answer to a question in the House, Mr. Duff Cooper said: "Chemicals required for the testing of respirators" (by The Chemical Defence Department) "are obtained from the chemical industry. As I informed the honourable member on the 11th November, it is not in the public interest to disclose further details."

The close co-operation between the Chemical Defence Department and the "chemical industry," which he does reveal, is paralleled by a connexion between that Department and the Universities ; and rounded off by a connexion between the Universities and the chemical industry.

"The Chemical Defence Research Department consists of headquarters in London and establishments at Porton, near Salisbury, and at Sutton Oak, Lancashire.

"It carries out on behalf of the three Service Departments research and experiments relating to defence against gas, and in particular investigates methods for the prevention and alleviation of human and animal suffering which might be caused by gas. . . .

"Recourse is also had, where practicable, to the services of Universities and similar institutions."

(*Army Estimates*, 1933, p. 170.)

These objects appear more humane and laudable than credible, for as the Government experts should very well know, there is no possibility of passive defence against gas, with incendiary bombs, etc., for the majority of people, although "gas defence" makes good war propaganda. In addition, since to test gas masks you must not only use all known war gases, but all that might be discovered and used, research must be done towards discovering all possible new poison gases. In the work of this department, Cambridge has taken a part.

One of the branches of the department is the Chemical Defence Committee. Among the members of this Committee (1931) were Professor Barcroft (Professor of Physiology) and Professor Pope (Professor of Chemistry and the discoverer of the most efficient method of producing Mustard Gas), and chemical warfare research has been recently done, and is being done in Cambridge.

On May 11th, 1932, replying to a question by Mr. Rhys Davies, Mr. Duff Cooper said that "certain scientists at the Universities of Oxford, Cambridge and London carry out experiments on chemical defence problems, for which payment is made to them from Army funds." In the accounts of the Department of Physiology for 1932 there is the item "Contribution towards the expenses of chemical warfare research—£27 19s. 11d." This is not a large sum, but it indicates the degree of co-operation that existed, and there is a possibility of limitless expansion in time of war. It must also be remembered that in 1931 Professor Barcroft received, according to Mr. Duff Cooper's figures, £407 10s. 0d. as honorarium for serving on the Chemical Defence Committee.

The item did not appear in subsequent accounts, and we have Mr. Duff Cooper in November, 1932, asserting in the House that chemical defence research was only being carried out at Oxford University.

The cessation of chemical research corresponded to the visit to Cambridge of the German war chemist, Haber.

Chemical research, momentarily discontinued, has reappeared

in Cambridge, and there is now a worker in the Chemistry Department engaged in poison gas research. Other University military connexions have continued all the time. The Department of Physiology at present houses two military officers doing scientific work. The Department of Engineering received last year £201 from the Air Ministry, and it also receives, of course, payment of about £3,000 annually from the War Office for training Royal Engineers.

These are not large items ; the majority of laboratories are innocent of direct military research ; but the liaison between certain scientific departments, and industrial trusts, and war departments, can be clearly seen by anyone examining the official material. Secret research is done, war research is done ; and it is a small step, as in 1914, to convert the laboratories into research departments of the War Office.

Conclusion.

We have seen the large proportion of State expenditure on scientific research which goes to directly military purpose and the possible military uses of much of the other expenditure. Further there is definite interconnexion between War Ministries and Universities, and between both of these and industry. Finally, war research is carried out in Cambridge.

Two immediate steps could be taken to avert the use of this University for such purposes. The first is that a statute be passed enforcing the publication of all research, of whatever kind, carried out in Cambridge, and the publication of the source of the research grant. This would involve no difficulty for the pro-social researcher and should not, as Professor Sir W. Pope argued, in opposing a recommendation made by the Council that research should be published, "wound, and arouse a just indignation" in those "firms and individuals who," connected with industry, "had made immense money gifts to the University during the last twenty years, and **had shown great breadth of mind and vision in the manner of making those gifts.**"

(*Cambridge University Reporter*, May 15th, 1934, p. 991.)

The second step which is necessary is the establishment of a solid body of scientific opinion, which refuses to engage in or to allow free-lance scientists to engage in war research, and whose organisation extends, from those being trained to research to the directors of all laboratories.

VI. WHAT IS TO BE DONE?

We have seen some of the ways in which the last war was prepared for and carried on in Cambridge, and something of the effects which it had on the University. From this we can form some idea of the ways in which the University may be made use of now and in the future for preparing and carrying on the next war—and we may try to imagine how much more destructive of the purposes for which a University exists the next war is likely to be.

What can we do in Cambridge to prevent the next war? What could we do, if it had broken out, to bring it to an end as quickly as possible? To prevent or mitigate its prostitution of science, culture and thought, and its uncompromising rejection of liberty?

WHAT DID THEY DO ?

Let us see in the first place what was done in these directions in Cambridge before and during the last war. It would be natural to suppose that Cambridge, where the capacity for independent thought has received some cultivation, and where the materials for forming an independent judgment on the issues of the war were available to all, would have been to some extent a centre of opposition to the war. And it is refreshing to be able to record that there were some Cambridge men who as individuals made use of their advantages, saw through the all-surrounding propaganda, and condemned the war, or at least some of its aspects. By considering what was done by opponents of the last war, what treatment they received and what effect their opposition had, we can make the best use of their experience to draw from it practical lessons for the present and the future. The behaviour of Cambridge pacifists was, of course, very little different from the behaviour of pacifists elsewhere.

From well before the beginning of the war, protests were made against the attempts to force military training on the University; and this kind of protest, against injustices and encroachments of various kinds, lasts throughout the whole period of the war, and makes up a good proportion of the opposition to the authorities. The indefatigable Dr. Mayo deserves honourable mention here. Many who joined in protests of this kind were not opposed to the war as such.

"We hear suggestions that there is a danger of undue pressure being brought to bear on "Freshers" to join the O.T.C. this term.

We do not really believe that any college authorities will be so foolish as to jeopardise the chances of producing a really efficient body of officers by action so illegal and unjustifiable."

(*Cambridge Magazine*, October 10th, 1914.)

Thus, the *Cambridge University Reporter* (June 1st, 1914) reports a Memorial submitted to the Council by certain resident members of the Senate expressing the view that it is highly undesirable that the University should by its own authority require any form of military service from any of its members. Those who presented this Memorial added that they did not desire to express any opinion for or against any general form of national military service.

At the beginning of the war, the most active organisation for pacifism was the Society of Friends. They issued several pamphlets dealing with the question from a broadly religious and moral standpoint. They do not appear to have received much publicity in Cambridge. The *Cambridge Magazine* (November 28th, 1914) quotes a lecture by H. T. Hodgkin (King's) on "Christianity and War" in which he said, "War is contrary to the mind of Christ and in no circumstances justifiable." When conscription was introduced, the Quakers formed the largest section (14 per cent.) of conscientious objectors; Congregationalists and Agnostics formed the next most numerous groups.

(*Report on Pacifism and Conscientious Objection*, C.U. Library WRD 34, P363.)

Soon after the outbreak of war was formed the Union of Democratic Control, which issued a series of pacifist pamphlets containing constructive proposals for peace with "no annexations," and kept in touch with pacifist propaganda in other countries. A branch was formed in Cambridge in January, 1915, and at its inaugural meeting, 50 new members were enrolled, including 14 Fellows of Trinity (*Cambridge Magazine*, February 13th, 1915). At a subsequent meeting Mr. Morel explained "The movement is not a 'stop-the-war' but a 'stop-the-cause-of-war' campaign."

(*Cambridge Magazine*, March 6th, 1915.)

In October, 1914, when conscription was threatened, the No-Conscription Fellowship was formed mainly by people who were also connected with the U.D.C., and by June, 1916, it had enlisted

20,000 members. It gave advice as to the best course for conscientious objectors to follow, and published facts about the treatment of prisoners and the behaviour of tribunals. On the list of the Executive Committee of the National Council Against Conscription appear the names of Clifford Allen (Peterhouse), G. F. Shove (King's) and H. T. Hodgkin (King's).

Of old Cambridge societies, the "Heretics" continued to meet, discussing non-controversial subjects. The Union decided not to divide on controversial subjects, which were however, discussed. The Liberal Club avoided political subjects in the October term, 1914, but resumed them in the next term, being addressed by Mr. Ponsonby, who attributed the war to secret diplomacy, and Mr. Lowes Dickinson, who attributed it to the abstract conception of the State.

In November, 1915, Clifford Allen (Peterhouse), addressed a joint meeting of the C.U. Socialist Society and Cambridge I.L.P. on "Labour and Socialism after the War."

(*Cambridge Review*, November 3rd, 1915.)

These or similar bodies must, however, have been active earlier, since the Socialists are stigmatised as "worse than Jews," along with Liberals and Pacifists, as early as March of that year, by Archdeacon Cunningham.

(*Cambridge Magazine*, March 13th, 1915.)

As for the Press in Cambridge, the *Cambridge Magazine* alone set out deliberately to give expression to pacifist and other opposition views. The *Cambridge University Reporter* naturally did not exclude matter which fell within its scope, and the *Cambridge Review* and *Cambridge Daily News* gave a certain amount of freedom of expression of opinion in their columns.

Numerous pamphlets and newspaper articles criticising the war, analysing its causes and advocating measures to prevent or cure it, appear over the signatures of Cambridge men from the earliest days of the war. Mr. Bertrand Russell writes in the *Labour Leader* :

"In every nation by secret diplomacy, by co-operation of the Press with armament manufacturers, by the desire of the rich to distract the attention of the working-classes from social injustice, suspicion of other nations is carefully cultivated, until a state of nightmare terror is produced. . . . If the world is to enjoy a secure peace when this war is ended . . . armaments must be immensely

reduced, . . . diplomacy must be conducted publicly and arbitration treaties must bind nations to seek a peaceful settlement of their differences . . . none (of these things) will be secured if the negotiations are left in the hands of the men who made the war."

(Reprinted in *Cambridge Magazine*, October 10th, 1914.)

We may mention also the pamphlets, *Workers and War* by Clifford Allen (Peterhouse), describing war as a capitalist concern ; *War the Offspring of Fear* by Bertrand Russell (Trinity) ; and *The War and the Way Out* by Lowes Dickinson (King's), criticising the conduct of English diplomatists as "barren of imagination, of humanity, of sense of life," and proposing a permanent European League who should place their armaments in the hands of an international authority.

It is worth noticing that speculation and discussion on the prevention of war was not confined to those who were opposing the authorities. There were many who held that the war was justified only in so far as the victors made use of their victory to inaugurate a reign of international justice and peace. Professor Pigou made suggestions for lenient terms of peace ; the Union debated "That it is the opinion of this House that in the terms of peace, Britain should gain not one penny nor one foot of land" ; Lieut. Baganal wrote to the *Cambridge Magazine* (November 28th, 1914) to signify his agreement with Romain Rolland, stating "We are fighting for something more to-day than patriotism—for humanity—fighting, we believe, for the last time."

On January 28th, 1916, after much opposition mainly from the Labour Party, the Military Service Act was passed. It came into force in March. The Military Tribunals started their work, and especially in the early period were greatly misused. "I learn from a source that is quite authoritative that Mr. R. H. Wyatt, of Queen Anne Terrace, who took his B.A. degree last June, was sentenced with fifteen others to one month's imprisonment for refusing to carry out military orders. When he refused to do work of a military kind in prison, he was placed in a dark cell, fed on bread and water, and put in irons for a part of each day. Word has been received that he was to be sent to France on the 8th of May." (*Cambridge Review*, May 10th, 1916.) In Cambridge cases of "serious injustice" occurred in the Local Tribunal sitting on exemptions from the Military Service Act. A petition to the Vice-Chancellor is reproduced appealing for exemption for

Mr. T. Tindle Anderson who was a conscientious objector to war on religious grounds.

(*Cambridge Magazine*, 1916.)

Some tribunals did not consider a man a real conscientious objector unless he could prove membership of some pacifist organisation two years previous to the war. Included among those imprisoned for conscientious objection in 1917 were five University Socialist Society members. Fifteen University graduates and five undergraduates altogether were imprisoned in this year for conscientious objection. According to the proportions given in W.R.D. there were over 150 teachers, lecturers, and students in prison for conscientious objection in March, 1918. (The material referred to in this and following paragraphs as W.R.D. consists of a series of pamphlets and reports dealing with pacifism and conscientious objection in the war, listed under that heading in the University Library, Cambridge.)

In June, 1916, the *Cambridge Magazine* notes: "In the meantime, arrests proceed slowly, and it is possible that the authorities are waiting to the end of the term before they accelerate their activities. It is not part of our programme to incur the displeasure of the powers that be, and since we understand that it is illegal to give publicity either to the treatment of objectors or even to behaviour of tribunals, the Editorial Committee has no option but to omit from this issue some four pages in which these matters were to be dealt with."

The treatment of objectors varied greatly at different camps. At Wandsworth it was exceptionally bad, and at Shoreham quite good. The Officer in Command at Shoreham said that he would send the prisoners back to civil life, but he couldn't.

(W.R.D. 34, 310.)

Inside the cover of a pamphlet on the treatment of conscientious objectors written by Mr. Crosfield, who had been in prison himself, was pencilled a list of fifteen University men imprisoned in Dartmoor in solitary confinement in 1918, five of whom were Cambridge men, including a Cambridge lecturer in Psychology and a Wrangler. (W.R.D. 34, 352.) The following shows how far the victimisation of objectors went. First an individual.

A Quaker writes: "Things are coming near the end this morning. I was taken up to a quiet place and simply 'pasted' until I couldn't stand and then they took me to the hospital and forcibly fed me.

. . . The colonel was standing near me and thundered up and shouted 'What! You won't obey me?' I quietly answered 'I must obey the commands of my God, Sir.' 'Damn your God! Take him to the special room.' Four of them set on me. One of them took me by the back of the neck, nearly choking me, shook me, and dragged me along, while the others pinched and thumped and kicked me as hard as they knew how. They banged my head on the floor and the walls, and threw me into a little cell with thick walls and a small skylight." Later he was put on bread and water for three days, and forcibly dragged through the company drill.

In Broxbourne, conscientious objectors were set to do manure work. They rose at 4.30. They were all billeted in one room, which served for eating, dressing and recreation, and their clothes, which stunk from the work, had to be hung there, too. No bathing was possible and the latrine, which was in very bad condition, was in the middle of the dormitory. The Rev. W. Marwick, of Edinburgh, was told, when inspecting, "that few if any are able to complete a week's work." Dr. J. C. MacCallum, Medical Officer of Health for Argyllshire, was among those set to work. (Ernest Hunter of No-Conscription Fellowship in W.R.D. 34, 352.) Public protests put an end to these excesses.

Of the effects of these tactics we may judge from the following:—

"Less than 4 per cent. of the arrested men have given way before this treatment; and even in the case of these, their lack of endurance by no means implies a lack of conscience. The conscientious determination of this handful of men has already thrown the military machine out of gear. Officers are harassed, discipline is publicly defied, guard rooms are full, a small army of military escorts and gaolers is employed in looking after the objectors, and the doctrines of brotherhood, of passive resistance, of internationalism are being preached and practised everywhere."

(W.R.D. 34, 310.)

In June, 1916, the case of *Rex v. Bertrand Russell* came up. Six men were imprisoned for distributing his leaflet, "Two years' hard labour for refusing to disobey the dictates of conscience," published by the No-Conscription Fellowship and concerned with the case of Mr. Everett. Bertrand Russell was given a choice of £100 or 61 days.

(W.R.D. 34, 362.)

This had a sequel in October. "Trinity in Disgrace. . . . In our last issue we recorded the fact that the Hon. Bertrand Russell was fined £100 under the Defence of the Realm Act as the writer of a leaflet on the case of a conscientious objector. Shortly after the end of term, the Council of Trinity College refused to allow Mr. Russell to reside in the college, or to deliver his lectures this year on Mathematical Logic. Mr. Russell's Cambridge belongings were confiscated for sale, and the wherewithal to pay the fine of £100 being thus provided, their owner was thus, in popular parlance, unceremoniously hoofed out! With the further aspects of the persecution, the refusal of the Foreign Office of a passport to Mr. Russell to Harvard, where he had been appointed to a lectureship . . . we are not concerned. . . . What concerns us in Cambridge is the extraordinary action of the Trinity Council which, as will be clear from what follows, threatens permanently to deprive the University of the services of one who is very widely regarded as the greatest philosopher of modern times."

(*Cambridge Magazine*, October, 1916.)

The *Cambridge Magazine* prints, for the interest of future generations, the names of the gentlemen who then formed the Trinity Council. Future generations are likely to remember Russell and his opposition to the war, when the interest of these gentlemen's names has departed.

Mr. Russell's views and activities had raised great controversy in Cambridge and elsewhere from the beginning of the war. He had engaged in anti-recruiting propaganda, as a result of which the authorities eventually forbade him to enter any county bordering on the sea! (This includes well over half the counties of England.) During this time, however, Mr. Russell was far from inactive intellectually, for frequent articles and reviews of books on mathematical and philosophical subjects by him appear in the *Cambridge Magazine*. At the time of his arrest he was "about to plunge into a new field of philosophical research."

The other outstanding personality in Cambridge in this fight against war was Mr. G. Lowes Dickinson. Concentrating rather on the prevention of another war, than on opposition to the war that then existed, Mr. Lowes Dickinson discussed in a large number of pamphlets and books the political origins of the war. (See Chap. XII and Bibliography of *Goldsworthy Lowes Dickinson* by E. M. Forster.) The idea and detailed structure of a League of Nations was worked out during the war by Lowes Dickinson and

other English intellectuals, made use of by President Wilson, and effectively castrated by Clemenceau and Lloyd George.

It is interesting to consider the position of the Student Christian Movement during and after the war. (The following statements are based on *The Story of the Student Christian Movement* by Tissington Tallow, S.C.M. Press, 1933.) The S.C.M. possessed international connexions before the war, and a correspondence was carried on with the German S.C.M. This and subsequent discussions within the Movement appear to have raised doubts in some minds as to the sole responsibility of Germany for the war. For the greater part of the war, disillusionment grew, but the Movement did not take any independent position. "We are surrounded by a strange tangle of influences. We hardly know how much our own will is behind what we believe or how much is reaction in one direction or another from what is going on around us." There was considerable disappointment that no lead was given to the students by the Churches. "There was little to choose between the Churches in Great Britain and in Germany, and the student class was deeply shocked."

The S.C.M. continued to hold its holiday conferences, in spite of criticism, and did much to provide for the relief of refugees. The final period of the war was one of great disillusionment, combined with intense interest in social problems, and the years immediately after the war saw this interest immensely strengthened. Contact with German students during the period of the blockade made a great impression on the English S.C.M. It can be said safely that the situation at the beginning of the last war expressed in the following words, will not be repeated, "None of the students or secretaries of the Movement paid any attention to the war-clouds in Europe."

Let us return for a moment to Cambridge. On Armistice Day, 1918, the offices of the *Cambridge Magazine* were wrecked. The magazine of March 15th, 1919, prints a circular of the C.U.B.C. protesting against this outrage and against the breaking up of a debate between the C.U. Socialist Society and the Cambridge I.L.P. In the next issue, however, Capt. Baynes of the C.U.B.C. had to justify his circular against an attack from Dr. W. H. D. Rouse, Headmaster of the Perse School, whom it had bitterly offended. In Dr. Rouse's opinion "Cambridge is no place for such people as you—nor, indeed, is England. You might feel more at home in Germany."

WHAT DID THEY ACHIEVE ?

We have seen the different currents of opposition opinion that existed in Cambridge during the war ; democratic, libertarian, Christian, Radical and Socialist pacifist : we have seen the various methods of its expression ; in Press, pamphlet and public meeting ; through conscientious objection, through private and public protests, through the formation of societies to examine the causes of war, and work for their removal. We have seen some of the treatment with which these opponents of war were met. We have seen something of the effects their opposition had.

In spite of them, the war went on. In spite of them, Cambridge was drawn into the great machine, its educational purposes completely sacrificed to the business of killing. In spite of them the peace was a dictated peace, bearing the seeds of future wars.

Nevertheless, it should be clearly recognised that the popular opposition to the war in all countries had very great effects. Without this, the dictatorial behaviour of the militarist authorities would have been even more blatant, the victors would have allowed the vanquished an armistice even later, and would have imposed even more fantastic terms of peace. In Cambridge itself, too, the voice of opposition compelled some respect from the authorities.

HOW DID THEY FAIL ?

In what did the weakness of the opposition lie ?

First, many conscientious objectors found themselves involved in fruitless discussions of just what it was that their consciences objected to. Was this or that work, war work ? Through these discussions they found themselves often divided from their friends whose consciences drew the line at some different point.

Many, too, were victimised unnecessarily through the lack of preparation and organisation. And in the sphere of discussion they were often weakened by their division into numerous sects which tended to quarrel with one another on the ideal constitution of the world.

Finally, and most important of all, such opposition as there was remained from start to finish isolated. In so far as it attracted a fair amount of attention, in so far as it merely succeeded in raising in many people's minds the doubt as to whether this was really a purely righteous war, it performed a certain service. But that in itself did not make it an effective opposition to war. In so

far as it remained completely isolated from the mass of the people, and particularly from the working classes, it was condemned to fertility from the start.

More than sixteen years have passed since the Armistice. The evils from which we were promised release still exist. ***Every single one of the causes which have been assigned for the last war is still in working order.*** The irresponsibility of the national sovereign state, secret diplomacy, lack of democratic control of foreign policy, armament races and armament profits, the tearing up of international treaties, anti-foreign press propaganda, economic nationalism, the exploitation of subject classes and subject peoples . . . all these things still exist in 1935. The nations have learnt to shudder at the prospect of war, but the rulers of those nations have learnt no lesson from past experience . . . except that a different vocabulary is required to-day for carrying on the good old game.

ACT HERE AND NOW.

Many who take the problem of war seriously and are prepared to do something to prevent it shrink before the vastness of the forces they are up against. And they are quite right. Problems of such size can be solved neither in a hurry, nor by half a dozen people. But what cannot be done in one go may be achieved piece-meal, by the co-operation of numbers of different people, by organised and deliberate action.

The problem of war is a large one precisely because the world is a large place ; and for the same reason there are everywhere many people who are in various degrees alive to the danger. ***Let us begin at home.***

And let us begin now, ahead of time. We have rational minds ; let us use them to foresee events and to determine our own actions in advance. By waiting until catastrophe overtakes us we shall only condemn ourselves to failure. It is useless to wait until all are agreed on what precisely are the basic causes of war, and what precisely is the ideal form of society. By the time such agreement is achieved, the dangers themselves will have disappeared or have overwhelmed us. We have enumerated above eight causes which have been assigned as the fundamental cause of modern wars, and more could have been added. Prolonged experience and deep investigations can alone finally decide which of them does play the most important part. And it is, of course,

of the greatest importance to get as full an understanding of the question as we can. In the meanwhile, however, there can be no doubt that all of these factors play some part, and that they are not independent of one another. It is only sane to determine to resist the operation of all, in so far as we see them actually in operation, and in so far as we are able to do anything against them.

Let us then get down to brass tacks. Here, in Cambridge, war preparations are going on. They do not look much, but they are a beginning. And the last war showed, how swift and easy the expansion from a small beginning can be : in the official phrase "a scheme has been prepared." And in any case, large or small, what business have they in the University at all? ***Military preparations are not only not the proper occupation of an educational institution, they are directly antagonistic to education.*** What precisely is the object of the co-operation between the University and the War Office in the arrangement of Military Studies? If any one thinks that these "Studies" are genuine academic studies of the history and principles of warfare, he is mistaken. And why does the University make special arrangement with the Air Ministry in regard to the Air Squadron? Because Hydrodynamics is such a fascinating subject? In that case the University would get considerably greater results if it encouraged co-operation between the faculties of Mathematics and Mechanical Sciences, and left the Air Ministry out of the deal.

Just exactly why is it that the laboratories of this University are sometimes used for the discovery of scientific facts which are then kept secret? Is this in the interests of the pursuit of knowledge and education? Why is it that the sources and magnitudes of some grants for research work are not ascertainable? No doubt a good proportion of these grants are from industrial interests trying to steal a march on their rivals. Even then it does not appear evident that it is the business of the University to enlist itself under such service. But if all the research is for purely industrial purposes, why should it not be published? Then we would have solid evidence as to the absence of war research in the University laboratories. Until then . . . well, those who work in the dark are naturally suspected of having something to hide.

When America declared war on Germany in 1917, the Vice-Chancellor sent the following telegram to the President of Harvard: "British Cambridge welcomes American Cambridge as brothers in arms." The reply was received : "Harvard glad to fight shoulder to shoulder with parent University."

We, Cambridge students, call upon the students not only of Harvard, but throughout the world, to fight shoulder to shoulder with us now. Those who fought in the last World War steeled themselves to its horrors with the thought that it was the last war. We must make it so. We must join in a concerted effort to oppose war. We must put ourselves in a position to understand and react intelligently to the process of events, instead of being swept away by it.

Every consideration leads back to the same focal point: Start here, now, on details which seem trivial but which form the actual material from which a great war is built up; get together and act in an organised way; join up with and support every possible ally. Resist preparations for war inside the University.

(This pamphlet has been written under the auspices and direction of the Co-ordinating Committee for Research into the Use of the University for War. The following organisations are represented on the Committee :—

Cambridge University Anti-War Movement.

Cambridge University Friends Society.

Cambridge University Socialist Society.

University Labour Federation.

Cambridge University Labour Club.)

